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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,178	01/25/2002	John Christian Hermansen	20837-007401	8444

7590 04/07/2006  
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EXAMINER

HWANG, JOON H

ART UNIT PAPER NUMBER

2166

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/055,178

Applicant(s)

HERMANSEN ET AL.

Examiner

Joon H. Hwang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 32-94 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-94 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/27/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 1/27/06 has been entered.

The pending claims are 32-94.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 32-94 are rejected under 35 U.S.C. 102(a) as being anticipated by Final Report (hereinafter FR) (Name Searching Research Project Phase 2, May 31, 1997, pages 1-67).

With respect to claim 32, FR teaches accessing a text input name entered as an input name by one or more of a user or a system (i.e., a query name, section 4.1.1 on page 9). FR teaches determining multiple phonetic representations for a portion of the text input name, each of the multiple phonetic representations being for a different pronunciation of the text input name (section 4.1.10 on page 15). FR teaches comparing each of the multiple phonetic representations of the portion of the text input name to a phonetic representation of a portion of a text known name stored in a database (section 4.2.5.1 on page 27). FR teaches providing an indication of whether the text input name matches the text known name based on the comparing (section 4.2.5.1 on page 27 and query results on page 34).

With respect to claim 33, FR teaches classifying the text input name as belonging to a particular culture (section 3.3.2 on pages 6-7 and section 3.3.3 on pages 7-8). FR teaches selecting a rule based on the classifying of the text input name (section 4.1.11.8 on pages 19-20). FR teaches applying the rule in determining the multiple phonetic representations for the portion of the text input name (section 4.1.11.8 on pages 19-20 and section 4.1.13 on pages 20-21).

With respect to claim 34, FR teaches classifying the text input name as belonging to a particular culture (section 3.3.2 on pages 6-7 and section 3.3.3 on pages 7-8). FR teaches selecting multiple rules based on the classifying of the text input name (section 4.1.11.8 on pages 19-20, section 4.1.12 on page 20, and section 4.1.13 on pages 20-21). FR teaches applying the multiple rules in determining the multiple phonetic

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representations for the portion of the text input name (section 4.1.11.8 on pages 19-20 and section 4.1.13 on pages 20-21).

With respect to claim 35, FR teaches comparing each of the multiple phonetic representations of the portion of the text input name to the phonetic representation of the portion of the text known name comprises determining articulatory similarity between at least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name (section 2 on pages 2-3 and section 4.2.1 on pages 21-24). FR teaches providing the indication comprises providing an indication of articulatory similarity between the text input name and the text known name, the indication of articulatory similarity being based on the determining of articulatory similarity (section 4.2.5.1 on page 27 and query results on page 34).

With respect to claim 36, FR teaches identifying an articulatory variation between one or more of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name (section 2 on pages 2-3 and section 4.2.1 on pages 21-24). FR teaches classifying the articulatory variation as likely or unlikely (i.e., sonority hierarchy, section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33). FR teaches determining articulatory similarity comprises attributing less significance to the articulatory variation, so as to indicate greater articulatory similarity, if the articulatory variation is likely than if the articulatory variation is unlikely (section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

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With respect to claim 37, FR teaches determining articulatory similarity based on a culture-specific rule (section 4.1.11.8 on pages 19-20, section 4.1.13 on pages 20-21, section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

With respect to claim 38, FR teaches determining articulatory similarity between at least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name comprises determining, for the at least one of the multiple phonetic representations of the portion of the text input name, how many phonetic features are in common between corresponding portions of the at least one phonetic representation of the portion of the text input name and the phonetic representation of the portion of the text known name (i.e., articulatory distance, section 4.2.1 on pages 21-24), and providing the indication of articulatory similarity comprises providing an indication that is based on the determining of how many phonetic features are in common (section 4.2.5.1 on page 27 and query results on page 34).

With respect to claim 39, FR teaches the at least one phonetic representation of the portion of the text input name comprises an International Phonetic Alphabet (IPA) representation of the text input name (section 4.1.1 on page 9), the phonetic representation of the portion of the text known name comprises an IPA representation of the portion of the text known name (section 4.1.1 on page 9), and determining how many phonetic features are in common between corresponding portions of the at least one phonetic representation of the portion of the text input name and the phonetic

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representation of the portion of the text known name comprises determining how many phonetic features are in common between corresponding symbols from the IPA representation of the portion of the text input name and the IPA representation of the portion of the text known name (section 4.1.1 on page 9 and section 4.2.1 on pages 21-24).

With respect to claim 40, FR teaches determining how many phonetic features are in common between corresponding symbols from the IPA representation of the portion of the text input name and the IPA representation of the portion of the text known name is based on a culture-specific rule (section 4.1.1 on page 9, section 4.1.11.8 on pages 19-20, section 4.1.13 on pages 20-21, section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

With respect to claim 41, FR teaches determining multiple phonetic representation comprises determining multiple representations that are each based on an IPA (section 4.1.1 on page 9).

With respect to claim 42, FR teaches comparing each of the multiple phonetic representations of the portion of the input name to a second phonetic representation of the portion of the text known name (section 4.1.10 on page 15).

With respect to claim 43, FR teaches accessing the text input name comprises accessing a character representation of the text input name (section 4.1.8 on page 14 and section 4.1.10 on page 15).

With respect to claim 44, FR teaches determining multiple phonetic representations comprises using a rule relating character representations to sounds

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(section 4.1.1 on page 9, section 4.1.11.8 on pages 19-20, section 4.1.13 on pages 20-21, section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

With respect to claim 45, FR teaches the character representation of the text input name reflects a spelling from a specific culture and determining multiple phonetic representations comprises using a rule for determining phonetic representations, the rule being based on the specific culture (section 4.1.11.8 on pages 19-20, section 4.1.13 on pages 20-21, section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

With respect to claim 46, FR teaches the character representation of the text input name reflects a spelling from a specific culture, the text input name belongs to another culture that is different from the specific culture, and determining multiple phonetic representations comprises using a rule for determining phonetic representations, the rule being based on the specific culture (section 4.1.11.8 on pages 19-20, section 4.1.13 on pages 20-21, section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

With respect to claim 47, FR teaches the character representation of the text input name reflects a spelling from a specific culture, the text input name belongs to another culture that is different from the specific culture, and determining multiple phonetic representations comprises using a rule for determining phonetic representations, the rule being based on the other culture (section 4.1.11.8 on pages



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19-20, section 4.1.13 on pages 20-21, section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

With respect to claim 48, FR teaches the character representation of the text input name reflects a spelling from a specific culture, the text input name belongs to the specific culture, and determining multiple phonetic representations comprises using a rule for determining phonetic representations, the rule being based on the specific culture (section 4.1.11.8 on pages 19-20, section 4.1.13 on pages 20-21, section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

With respect to claim 49, FR teaches providing the indication comprises providing an indication that the text input name exactly matches the text known name (section 4.2.7.2.2 on pages 36-37 and section 5.2 on pages 51-52).

With respect to claim 50, FR teaches providing the indication comprises providing an indication that the text input name dose not exactly matches the text known name (section 4.2.7.2.2 on pages 36-37 and section 5.2 on pages 51-52).

With respect to claim 51, FR teaches comparing, for at least one of the multiple phonetic representations of the portion of the text input name, corresponding parts of the at least one phonetic representation of the portion of the text input name and the phonetic representation of the portion of the text known name (section 2 on pages 2-3, section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, and query results on page 34).

With respect to claim 52, FR teaches the corresponding parts include parts that correspond at a syntactic level (section 5.2 on pages 51-52).

With respect to claim 53, FR teaches the corresponding parts include parts that correspond at a syllabic level (section 4.2.6 on pages 28-29 and section 4.2.6.2 on pages 30-31).

With respect to claim 54, FR teaches the parts that correspond at the syllabic level include a first part that relates to a left-most syllable of the portion of the text input name and a second part that relates to a left-most syllable of the portion of the text known name (section 4.2.6.3 on pages 31-33 and section 4.2.7 on pages 33-35).

With respect to claim 55, FR teaches the first part further relates to both an initial phonologic element and a final phonologic element of the left-most syllable of the portion of the text input name and the second part further relates to an initial phonologic element and a final phonologic element of the left-most syllable of the portion of the text known name (section 4.2.6.3 on pages 31-33, section 4.2.7 on pages 33-35, and section 5.2 on pages 51-52).

With respect to claim 56, FR teaches producing a result from the comparing of the first part and the second part and determining, based on the result, whether to continue comparing the at least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name (section 4.2.6.3 on pages 31-33, section 4.2.7 on pages 33-35, and section 5.2 on pages 51-52).

With respect to claim 57, FR teaches corresponding parts include parts that correspond at a morphologic level (section 4.2.1 on page 21-24).

With respect to claim 58, FR teaches corresponding parts include parts that correspond at a phonologic level (section 4.2.1 on page 21-24).

With respect to claim 59, FR teaches the parts that correspond at the phonologic level include a first part that relates to a final phoneme of the portion of the text input name and a second part that relates to a final phoneme of the portion of the text known name (section 4.2.1 on page 21-24 and section 4.2.4 on page 24-26).

With respect to claim 60, FR teaches comparing each of the multiple phonetic representations of the portion of the text input name to the phonetic representation of the portion of the text known name comprises comparing, for at least one of the multiple phonetic representations of the portion of the text input name, sonority level between at least part of the at least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name (section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33).

With respect to claim 61, FR teaches providing the indication of whether the text input name matches the text known name comprise providing a rank-ordered list of names, with rank-order indicating a likelihood of matching the text input name (section 4.2.5.1 on page 27 and query results on page 34).

With respect to claim 62, FR teaches providing the rank-ordered list of names comprises ranking names on the rank-ordered list based on a degree of articulatory similarity between names on the rank-ordered list and the text input name (section 4.2.5.1 on page 27 and query results on page 34).

With respect to claim 63, FR teaches the rank-ordered list of name includes the text known name (section 4.2.5.1 on page 27 and query results on page 34).

With respect to claim 64, FR teaches comparing, for at least one of the multiple phonetic representations of the portion of the text input name, sonority level between at least part of the at least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name (section 4.2.1 on pages 21-24, section 4.2.5.2 on pages 27-28, and section 4.2.6.3 on pages 31-33) and basing rank-order of the text known name on the comparing of sonority level (section 4.2.5.1 on page 27 and query results on page 34).

With respect to claim 65, FR teaches determining whether the text known name includes a morphological element, and basing rank-order of the text known name on whether the text known name includes a morphological element (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, and query results on page 34).

With respect to claim 66, FR teaches comparing, for at least one of the multiple phonetic representations of the portion of the text input name, an initial sound of the at least one of the multiple phonetic representations of the portion of the text input name and an initial sound of the phonetic representation of the portion of the text known name, and basing rank-order of the text known name on the comparing of initial sounds (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, and query results on page 34).

With respect to claim 67, FR teaches comparing, for at least one of the multiple phonetic representations of the portion of the text input name, syllabic structure of the at

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least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name, and basing rank-order of the text known name on the comparing of syllabic structure (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, query results on page 34, and section 4.2.6.2 on pages 30-31).

With respect to claim 68, FR teaches comparing syllabic similarity (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, query results on page 34, and section 4.2.6.2 on pages 30-31).

With respect to claim 69, FR teaches comparing, for at least one of the multiple phonetic representations of the portion of the text input name, location of stress in the at least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name, and basing rank-order of the text known name on the comparing of location of stress (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, section 4.2.6 on pages 28-29, and query results on page 34).

With respect to claim 70, FR teaches comparing, for at least one of the multiple phonetic representations of the portion of the text input name, orthographic similarity between the at least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name, and basing rank-order of the text known name on the comparing of orthographic similarity (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, query results on page 34, and section 4.2.8.1.4 on pages 43-44).

With respect to claim 71, FR teaches comparing each of the multiple phonetic representations of the portion of the text input name to the phonetic representation of the portion of the text known name comprises discounting, for at least one of the multiple phonetic representations of the portion of the text input name, an occurrence of a likely articulatory variation between the at least one of the multiple phonetic representations of the portion of the text input name and the phonetic representation of the portion of the text known name (section 4.1.11.7 on page 18).

With respect to claim 72, FR teaches identifying a particle in the text input, and attributing less significance to the particle, than to another part of the text input name, in providing the indication of whether the text input name matches the text known name (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, and query results on page 34).

With respect to claim 73, FR teaches attributes less significance to the particle comprises deciding not to determine a phonetic representation of the particle (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, and query results on page 34).

With respect to claim 74, FR teaches attributes less significance to the particle comprises deciding not to compare a phonetic representation of the particle to a phonetic representation of a part of the text known name (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, and query results on page 34).

With respect to claim 75, FR teaches identifying a title, affix, or qualifier as particle (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, and query results on page 34).

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With respect to claim 76, FR teaches accessing a portion of a complete name (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, query results on page 34, and section 5.2 on page 51-52).

With respect to claim 77, FR teaches the entire input name (section 4.2.1 on pages 21-24, section 4.2.5.1 on page 27, query results on page 34, and section 5.2 on page 51-52).

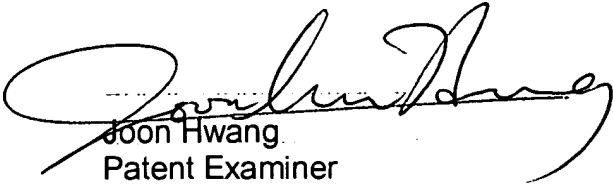
Claims 78-94 are essentially the same as claims 32-42, 51, 53-54, and 60-62 except that it sets forth the claimed invention as a system rather than a method and rejected for the same reasons as applied hereinabove.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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